

## ABSTRACT OF THE DISCLOSURE

Apparatus and methods for non-invasively determining the cardiac output or pulmonary capillary blood flow of a patient using partial re-breathing techniques. The apparatus includes a substantially instantaneously adjustable deadspace volume for accommodating differences in sizes or breathing capacities of various patients. The apparatus may be constructed of inexpensive elements, including one or more two-way valves, which render the apparatus very simple to use and inexpensive so that the unit may be employed as a disposable product. The method of the invention includes estimating the cardiac output or pulmonary capillary blood flow of a patient based on partial pressure of alveolar CO<sub>2</sub>, rather than on the partial pressure of end tidal CO<sub>2</sub>, as previously practiced. A computer program for calculating the cardiac output or pulmonary capillary blood flow of a patient is also disclosed.

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